IN THE SPECIFICATION

Following is a marked-up version of each amended paragraph of the subject patent application. The Examiner is requested to delete the indicated paragraph and replace it with the amended paragraph. The location for each of the deleted and replaced paragraphs is also indicated.

Replace paragraph [0004] with the following:

[0004] Figure 1 illustrates an HBT 10. A silicon-germanium (SiGe) layer 12 overlies a silicon substrate 14 between two silicon dioxide spacers 16. In stacked relation, the HBT ~~SiGe layer 12~~ comprises a collector, base, and emitter. A base polysilicon layer 18 forms a contact with the base region 19 of the SiGe layer 12 and is further connected to a base contact, not shown in Figure 1, for accessing the base region. A silicon nitride layer 22A, silicon nitride spacers 22B, silicon nitride spacers 24 and silicon dioxide spacers 26 separate an arsenic-doped polysilicon layer 30 from the base polysilicon layer 18. A buried doped layer (not shown in Figure 1) within the silicon substrate 14 contacts the collector region, which is disposed at the bottom of the SiGe layer 12, and further is connected to a contact for providing access to the collector.

Replace paragraph [0005] with the following:

[0005] The process for forming the HBT 10 is illustrated beginning in Figure 2, showing a stack 38 comprising a ~~an~~ silicon dioxide layer 40 (formed preferably by a TEOS (tetraethyl orthosilicate) process), a base polysilicon layer 42, a silicon-nitride layer 44 and an silicon dioxide cap layer 46. The base polysilicon layer 42 is doped p-type prior to formation of the silicon-nitride layer 44.

Replace paragraph [0009] with the following:

[0009] The SiGe layer 12 is then formed epitaxially on the silicon substrate 14. See Figure 7. Preferably the SiGe layer 12 comprises in stacked relation from the bottom, a spacer layer, a graded base region (where the Ge doping concentration is graded from the doping in the spacer layer down to about zero) and a silicon cap layer. Boron is introduced into the chamber atmosphere during formation of the base region and the silicon cap layer to form the p-type base. The collector region is formed within the spacer layer by the diffusion of phosphorous from the silicon substrate 14 upwardly into the spacer region of the SiGe layer 12.

Replace paragraph [0025] with the following:

[0025] Another exemplary application is prior to deposition of an arsenic-doped polycrystalline silicon layer, which serves as the emitter contact in a silicon germanium (SiGe) ~~true~~-heterojunction (HBT) NPN bipolar transistor. As with the graded base NPN bipolar transistor, the SiGe HBT epitaxial structure can be grown by a selective epitaxy process or by a non-selective process. In the SiGe HBT transistor the germanium concentration is high and nominally uniform across the base layer. In one embodiment, the selective SiGe HBT epitaxial structure comprises an upper SiGe spacer layer (un-doped), a SiGe base layer (boron doped in one embodiment), a lower SiGe spacer layer (un-doped) and the arsenic-doped silicon emitter layer. The NPN transistor is formed by subsequent arsenic diffusion from the arsenic-doped emitter layer into the upper SiGe spacer layer, boron diffusion from the SiGe base layer into both the upper and the lower SiGe spacer layers, and phosphorous diffusion from a substrate into the lower SiGe spacer layer. Arsenic also diffuses from the arsenic-doped polycrystalline layer into the arsenic-doped silicon emitter layer, reducing the emitter resistance.